UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,680	01/18/2001	Juan R. Loaiza	50277-1633	6337

29989 7590 01/28/2004		EXAMINER
HICKMAN PALERMO TRUONG & BECKER, LLP		DOOLEY, MATTHEW C
1600 WILLOW STREET		

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 01/28/2004

SAN JOSE, CA 95125

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 November 2003</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-49</u> is/are pending in the application.

   4a) Of the above claim(s) <u>10-13, 21, 22 and 32-37</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9, 14-20, 23-31 and 38-49</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
   since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
   37 CFR 1.78.

   a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
   reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4)☐ Interview Summary (PTO-413) Paper No(s). _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1-9, 14-20, 23-31, 38-49 are rejected under 35 U.S.C. 102(b) as being anticipated

by DeRoo et al., U.S. 5,182,752.

As per claim 1:

DeRoo teaches to generating checksum data by performing a physical checksum

calculation on a block of data, after generating the checksum, performing a verification

procedure on the data, and writing the data to nonvolatile memory if the data passes the

verification procedure (Fig.2, 3a-3b; Col.4: line 53-Col.5: line 29).

As per claim 2:

The device bus of DeRoo allows for a write request to be sent to initiate the

checksum generation (Fig.1).

As per claim 3:

DeRoo teaches to both the checksum data and the block of data are written to the

non-volatile memory (Col.6: 14-16).

As per claim 4:

DeRoo teaches to after writing the data to nonvolatile memory, causing the data to

be read from nonvolatile memory and performing a second physical checksum

verification procedure on the data wherein the second verification indicates whether the

data was corrupted subsequent to performing the first physical checksum verification on

the data (Fig.4b; Col.6: 20-21; Col.6: 47-Col.7: 18).

As per claim 5:

DeRoo teaches to the checksum verification procedure includes the steps of

performing a plurality of checksum verification procedures on the data prior to writing

the block of data to nonvolatile memory, wherein the plurality of physical checksum

verification procedures indicate whether the data was corrupted subsequent to performing

the physical checksum calculation on the data (Fig. 2, 3a-3b; Col.4: line 53-Col.5: line

29).

As per claim 6:

Utilization of both hardware and software for checksum calculation and

verification is known in the art and utilization of one technique respective to another can

be made based on speed and size requirements. Therefore, the method of DeRoo is

consistent with utilizing a software application for the checksum calculation, while

utilizing another component, such as the component illustrated in Figure 2, for

performing the first physical checksum verification procedure on the data prior to the

writing of the data to the nonvolatile memory.

As per claim 7:

Utilization of both hardware and software for checksum calculation and

verification is known in the art and utilization of one technique respective to another can

be made based on speed and size requirements. Therefore, the method of DeRoo is

consistent with utilizing a software application for the checksum calculation, while

utilizing another component, such as the component illustrated in Figure 2, for

performing the first physical checksum verification procedure on the data prior to the

writing of the data to the nonvolatile memory.

As per claim 8:

DeRoo teaches to the step of after performing the checksum calculation,

performing a logical check on data and if the data does not pass the logical check, then

not writing the data to nonvolatile memory (Col.5: 40-49).

As per claim 9:

DeRoo teaches to storing a backup version of the data wherein the backup is

stored separately from the block of data that is stored in the non-volatile memory (Col.6:

19-25).

As per claim 23:

DeRoo teaches to the steps of generating checksum data by performing a physical

checksum calculation on a block of data, after generating the checksum, performing a

verification procedure on the data, and writing the data to nonvolatile memory if the data

passes the verification procedure (Fig.2, 3a-3b; Col.4: line 53-Col.5: line 29).

As per claim 24:

The device bus of DeRoo allows for a write request to be sent to initiate the

checksum generation (Fig.1).

As per claim 25:

DeRoo teaches to the steps of both the checksum data and the block of data are

written to the non-volatile memory (Col.6: 14-16).

As per claim 26:

DeRoo teaches the steps of after writing the data to nonvolatile memory, causing

the data to be read from nonvolatile memory and performing a second physical checksum

verification procedure on the data wherein the second verification indicates whether the

data was corrupted subsequent to performing the first physical checksum verification on

the data (Fig.4b; Col.6: 20-21; Col.6: 47-Col.7: 18).

As per claim 27:

DeRoo teaches to the steps of checksum verification procedure includes the steps

of performing a plurality of checksum verification procedures on the data prior to writing

the block of data to nonvolatile memory, wherein the plurality of physical checksum

verification procedures indicate whether the data was corrupted subsequent to performing

the physical checksum calculation on the data (Fig. 2, 3a-3b; Col.4: line 53-Col.5: line

29).

As per claim 28:

Utilization of both hardware and software for checksum calculation and

verification is known in the art and utilization of one technique respective to another can

be made based on speed and size requirements. Therefore, the method of DeRoo is

consistent with utilizing a software application for the checksum calculation, while

utilizing another component, such as the component illustrated in Figure 2, for

performing the first physical checksum verification procedure on the data prior to the

writing of the data to the nonvolatile memory.

As per claim 29:

Utilization of both hardware and software for checksum calculation and

verification is known in the art and utilization of one technique respective to another can

be made based on speed and size requirements. Therefore, the method of DeRoo is

consistent with utilizing a software application for the checksum calculation, while

utilizing another component, such as the component illustrated in Figure 2, for

performing the first physical checksum verification procedure on the data prior to the

writing of the data to the nonvolatile memory.

As per claim 30:

DeRoo teaches to the step of after performing the checksum calculation,

performing a logical check on data and if the data does not pass the logical check, then

not writing the data to nonvolatile memory (Col.5: 40-49).

As per claim 31:

DeRoo teaches to the steps of storing a backup version of the data wherein the

backup is stored separately from the block of data that is stored in the non-volatile

memory (Col.6: 19-25).

As per claims 14-20 and 38-49:

Claims 14-20 and 38-49 were rejected in the prior office action mailed 09/11/03

by DeRoo. This previous rejection is maintained. The Applicant's arguments will be dealt

with below.

Response to Arguments

2.   Applicant's arguments filed 11/03/03 have been fully considered but they are not

persuasive. With regards to claim 14, the data that is temporarily stored in the RAM circuitry is

made of a form that corresponds to the necessary format for the non-volatile storage mechanism
(DeRoo: Col.5: 14-21). The data is stored in RAM until it is sent to the non-volatile memory
(Col.6: 10-16). Therefore, although the data does pass temporarily to a volatile storage means,
the end result of the teachings of DeRoo encompass the limitations of claim 14. Claims 15-20
further limit claim 14 and as such their corresponding rejections are too maintained. As for the
argument for claim 17, the method is the patentable invention, and the system of DeRoo teaches
to the methodology of claim 17. Hardware and software is routinely utilized for identical
processes in checksum calculations, depending on such design parameters such as price, speed,
and size constraints. A similar argument is made with respect to claim 18. Here, the assertion of
the Applicant is that the use of a disk array makes the claim patentably distinct from the prior art
of record. However, here again, it is the methodology and end result of the circuitry that is
patentable. Systems component circuitry that might differ slightly, but performs the same
function acts as an equivalent and as such, the systems are not patentably distinct. Analogous
arguments can be made for the maintaining of the rejections of claims 38-44, and 45-48.

Conclusion

3.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within TWO
MONTHS of the mailing date of this final action and the advisory action is not mailed until after
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Matthew C. Dooley whose telephone number is (703) 306-5538.

The examiner can normally be reached on M-F 8:30-5:00.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the

organization where this application or proceeding is assigned is (703) 746-7239.

        Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Matthew Dooley
Examiner AU 2133
1/23/04